

# Research Analyst (Various Classes) Consolidated Series

## California State Personnel Board Specification

Series established April 1, 1976

Schem Code	Class Code	Class
LQ20	5729	Research Analyst I (General)
LQ23	5791	Research Analyst I (Economics)
LQ24	5807	Research Analyst I (Demography)
LQ22	5859	Research Analyst I (Social/Behavioral)
LQ25	7416	Research Analyst I (Geographic Information Systems)
LQIO	5731	Research Analyst II (General)
LQ12	5732	Research Analyst II (Social/Behavioral)
LQ13	5792	Research Analyst II (Economics)
LQ14	5809	Research Analyst II (Demography)
LQ15	7417	Research Analyst II (Geographic Information Systems)
Research Analyst (Various Classes) Series Specification - Class Titles and Codes		

### Definition of Series

This consolidated series specification describes classes (four salary ranges) in which employees, under supervision, perform technical research and statistical work in one or more of a wide variety of research fields, including social, financial, resource, economic, statistical, demographic, geographic, justice and related areas. The term research as applied to this class series, is defined as systematic, critical, intensive investigation directed toward either a more comprehensive knowledge of the subject or for use in the resolution of program related issues. This does not include library research solely to gather information; preparing and designing plans, projects and specifications for transportation or construction projects; or scientific research work in laboratories. Employees in this series gather, compile, edit, and interpret quantitative data in these enumerated areas or they develop, implement, and monitor systems and procedures to assemble and structure the necessary data. The research work differs from general staff analysis in that:

The work involves varied degrees of application of the research methodology including problem exploration and definition, planning and designing the approach and sequence of steps, collection of data, interpretation of findings, and documentation and reporting of findings in a structured, professional format.

Entry into this series typically comes at the entry level from college recruitment sources or through related State classifications at a lower level. Normally each professional discipline area will have its own separate class(es) which are designated by use of one or more of the specified levels followed by a parenthetical designation of the program specialty. Each special program incorporated into this specification will utilize only the class(es) that appropriately describe the type and level of work performed and the duties and responsibilities assigned to positions which are comparable to the appropriate level(s) described in this series specification.

### Factors Affecting Position Allocation

Overall scope and complexity of the research or statistical program and the relative complexity and professional requirements of the specific research or statistical projects. The number, level and function of other positions and the relative scope and complexity of these other activities in the department are compelling considerations also. Other factors include independence of action, level of decision making, degree or originality of techniques employed; degree of research methodology used; uniqueness of activities, impact and ultimate usage of conclusions and recommendations. A composite evaluation of all of these differentiating factors will be employed in making determinations on all allocations.

## **Definition of Levels**

### **Research Analyst I (General)**

This is an entry, recruiting and developmental class for persons qualified to perform basic technical research and statistical work in one or more areas of a broad range of research fields as a background for advancement in State service. Employees are assigned duties and responsibilities commensurate with their background and training. Positions may be permanently assigned to this level, Research Analyst I, when the major functions of the position do not include the more responsible, varied, independent and difficult assignments found in the full journey person level of Research Analyst II (Various Classes). Work at this level is characterized by a reliance on proven techniques and methodologies and usually involves assignments in areas where a comparable body of knowledge and experimentation exists.

### **Research Analyst II (General)**

This is the full journey level class. Under general direction, employees at this level perform a variety of tasks including the more independent, responsible, varied and complex technical research and statistical work in a variety of fields; they may provide consultative advice to various governmental entities and agencies, and may act as a leadperson. Work at this level is often characterized by independent development and employment of research methodology and techniques; and the designing and implementation of research projects. Usually involves investigation into areas where precedents are lacking or where only a sparse body of knowledge or experience in the area exist.

Incumbents often have lead responsibilities, work on multidisciplinary teams or have primary responsibility for a major project or activity.

## **Scope of Research Analyst Classes**

### **General**

Incumbents in this parenthetical are distinguished from other Research Analysts by being required to perform any combination of the general research and statistical duties listed in the Definition of Series. The depth of knowledge required in any one discipline are not as pronounced as found in other areas. This parenthetical is most appropriate for those settings requiring a broad understanding of basic research and statistical methods and ability to synthesize data from a variety of disciplines. The general classes require an overall comprehension of research methodology and statistical procedures.

### **Social/Behavioral**

Incumbents in this parenthetical speciality are distinguished from other Research Analysts by being required to perform research and statistical studies involving the evaluation and research of individual and social aspects of human behavior. The study conclusions are utilized for test construction, program planning, and implementation in such areas as traffic accidents, driver behavior, health care, vocational rehabilitation, delinquency, and criminal behavior.

### **Demography**

Incumbents in this parenthetical specialty are distinguished from other Research Analysts by being required to perform research and statistical studies involving the assessment of demographic patterns such as the composition, magnitude of the population and future population trends. The study conclusions are utilized in estimation of current and future population for the purpose of revenue estimating, tax allocation and limitation,

State budget preparation, energy and environmental planning and providing for future needs for education, transportation, water, air quality and special programs and facilities for the disadvantaged.

## Economics

Incumbents in this parenthetical specialty are distinguished from other Research Analysts by being required to perform research and statistical studies involving assessment of: the cost, supply, demand, utilization, and trends of a variety of resources; financial and economic trends; and program planning and funding. The studies' conclusions involve: analyses of such resources as energy, agricultural products, water, utilities, air, and their impact on the environment; and, planning a gamut of financial and economic activities.

## Geographic Information Systems

Incumbents in this parenthetical are distinguished from other Research Analysts by being able to perform research and statistical studies involving various types of digital spatial data and the techniques and methodologies associated with geographic information systems. The studies, objectives and conclusions may be based on spatial analysis of: natural resource management, land use and transportation planning, emergency response planning and health assessments.

## Minimum Qualifications

### Research Analyst I

#### General

#### EITHER I

Education: Equivalent to graduation from college with any major, but with extensive course work in an area appropriate to the parenthetical specialty, such as economics, psychology, sociology, demography, geography, anthropology, statistics, or a related research-oriented field. (See individual parentheticals.) This must include or be supplemented by at least one course in statistical methods.

(Registration as a senior in a recognized institution of higher education will admit applicants to the examination but they must produce evidence of graduation before they can be considered eligible for appointment.) (Work experience in the California state service performing technical research-related duties appropriate to the parenthetical specialty may be substituted for the required education on a year-for-year basis.)

#### OR II

Six months of experience performing research-related duties in the class of Management Services Technician, Range B, and twelve semester or eighteen quarter units of college courses in economics, psychology, sociology, demography, geography, or a subject closely related to the work. or

Twelve months of technical research-related duties in a class equivalent to that of Crime Studies Technician I.

## Social/Behavioral

Demonstrated achievement as evidenced through experience and education which provide ability to perform successfully (under supervision) evaluation and research of psychological and sociological behavior factors; and all of the requirements specified in the Research Analyst I (General).

## Demography

Demonstrated achievement as evidenced through education and experience which provides ability to perform successfully (under supervision) evaluation and research of demographic related topics; and all of the requirements specified in the Research Analyst (General).

## Economics

Demonstrated achievement as evidenced through experience or education which provide ability to perform successfully (under supervision) evaluation and research of economic trends and all of the requirements specified in the Research Analyst I (General).

## Geographic Information Systems

Demonstrated achievement as evidenced through experience or education which provides ability to perform successfully (under supervision) evaluation and research of geographic data and spatial analysis; and all of the requirements specified in the Research Analyst I (General).

## Research Analyst II

### General

#### EITHER I

Experience: At least one year of pertinent research experience appropriate to the parenthetical specialty performing the duties of a class with a level of responsibility equivalent to Research Analyst I, Range C. (Applicants who have completed six months of service performing the duties as specified above will be admitted to the examination but they must satisfactorily complete one year of this experience before they can be eligible for appointment.)

#### OR II

Experience: Three years of progressively responsible technical experience in a research program appropriate to the parenthetical specialty including two years above the trainee level engaged in the collection, compilation, analysis and interpretation of data. (Experience in the California state service applied toward this pattern must include at least one year of research experience appropriate to the parenthetical specialty performing the duties of a class with a level of responsibility equivalent to Research Analyst I, Range C.) (A Master's Degree in Economics, Psychology, Sociology, Demography, Geography, or a related research-oriented field may be substituted for one year of the required experience. A doctoral degree in the same areas may be substituted for two years of the required experience.) and

Education: Equivalent to graduation from college with any major but with extensive course work in an area appropriate to the parenthetical specialty, such as economics, psychology, sociology, demography, geography, anthropology, statistics, or a related research-oriented field.

This must include or be supplemented by at least one course in statistical methods.

## Social/Behavioral

Demonstrated achievement as evidenced through experience and education which provide ability to independently and successfully perform evaluation and research of psychological and sociological behavior factors; and all of the requirements specified in the Research Analyst II (General).

The pertinent experience specified in the Research Analyst II (General) means one year of experience equivalent to Research Analyst I (Social/Behavioral), Range C.

## Demography

Demonstrated achievement as evidenced through experience and education which provide ability to independently and successfully perform evaluation and research of demographic related topics; and all of the requirements specified in the Research Analyst II (General).

The pertinent experience specified in the Research Analyst II (General) means one year of experience equivalent to Research Analyst I (Demography), Range C.

## **Economics**

Demonstrated achievement as evidenced through experience and education which provide ability to independently and successfully perform evaluation and research of economic trends; and all of the requirements specified in the Research Analyst II (General).

The pertinent experience specified in the Research Analyst II (General) means one year of experience equivalent to Research Analyst I (Economics), Range C.

## **Geographic Information Systems**

Demonstrated achievement as evidenced through experience and education which provides ability to independently and successfully perform evaluation and research of geographic data and spatial analysis; and all of the requirements specified in the Research Analyst II (General).

The pertinent experience specified in the Research Analyst II (General) means one year of experience equivalent to Research Analyst I (GIS), Range C.

## **Knowledge and Abilities**

### **Research Analyst I**

#### **General**

Knowledge of: Research methods and techniques including planning of studies and investigations, statistical procedures, general principles, concepts and terminology used in research.

Ability to: Gather, compile, analyze and interpret data; prepare research and statistical reports; analyze written and numerical data regarding general governmental problems; speak and write effectively; reason logically and creatively and use a variety of analytical techniques to resolve or provide information regarding complex governmental and managerial problems; develop and evaluate alternatives; consult with and advise administrators or other interested parties on a wide variety of subject-matter areas; gain and maintain the confidence and cooperation of others.

#### **Social/Behavioral**

Knowledge of: Principles and concepts of psychological and sociological behavioral theory as applied in a research and statistical setting; and all of the requirements specified in the Research Analyst I (General).

Ability to: Conduct research and evaluate behavior (under supervision).

#### **Demography**

Knowledge of: Principles and concepts of demography as applied in a research and statistical setting; and all of the requirements specified in the Research Analyst I (General).

Ability to: Assess demographic patterns (under supervision).

#### **Economics**

Knowledge of: Principles and concepts of economics, resources, and finance as applied in a research and statistical setting; and all of the requirements specified in Research Analyst I (General).

#### **Geographic Information Systems**

Knowledge of: Principles and concepts of geography or cartography that relate to spatial analysis and all of the requirements as specified under Research Analyst I (General).

Ability to: Conduct research and perform spatial analysis using mapped and tabular information (under supervision).

## **Research Analyst II**

### **General**

The knowledge and abilities for the Research Analyst I plus understanding and commitment to effectively carry out State and departmental equal employment opportunity and affirmative action policies; designing and implementing research-related projects; departmental policies and procedures.

### **Social/Behavioral**

Knowledge of: Principles and concepts of psychological and sociological behavioral theory; techniques and methodologies for measuring psychological and sociological dimensions; social problems of governmental concern; experimental design procedures and all of the requirements specified in the Research Analyst II (General).

Ability to: Adapt and apply formal research methods and principles to research problems of an applied practical nature; research and evaluate behavior, design and validate studies.

### **Demography**

Knowledge of: Principles and concepts of demographic research; techniques of population projection; trend analysis procedures; and familiarity with United States Census Bureau practices, data and publications; and all of the requirements specified in the Research Analyst II (General).

Ability to: Adapt and apply formal research methods and principles of research problems of an applied practical nature; independently assess demographic patterns.

### **Economics**

Knowledge of: Principles and concepts of economics, public agency finance, resources, economic research methodology; and econometrics as applied in a research setting; and all of the requirements specified in the Research Analyst II (General).

Ability to: Adopt and apply formal research methods and principles to research problems of an applied practical nature.

### **Geographic Information Systems**

Knowledge of: Principles and concepts of geography, cartography, and computer mapping; techniques of spatial analysis that involve map overlays and proximity analysis; familiarity with various map products provided by the U.S. Geological Survey, including digital formats; familiarity with map projections and coordinate systems; and all of the requirements specified in the Research Analyst II (General).

Ability to: Adapt and perform spatial analysis techniques and methods to complex problems involving mapped information.

## **Desirable Qualifications**

### **Social/Behavioral**

College level courses equivalent to six semester hours of statistics, six semester hours of research techniques, and six semester hours of psychological-related or sociological-related courses.

### **Demography**

College level courses equivalent to six semester hours of demographic studies, and six semester hours of statistics.

## Economics

College level courses equivalent to six semester hours of advanced economics, six semester hours of public finance, and six semester hours of statistics.

## Geographic Information Systems

College level courses equivalent to six semester hours of geographic analysis techniques and six semester hours of data base management techniques; which may include computer cartography, remote sensing, or spatial analysis of statistical data.

## Special Personal Qualifications

### Research Analyst I

#### All Parentheticals:

Willingness to do routine or detailed work in order to learn the practical application of research principles; demonstrated capacity for development as evidenced by work history, academic attainment, participation in school or relevant nonschool activities, or by well-defined occupational interests; willingness and ability to accept increasing responsibility; flexibility; ability to work effectively with others.

### Research Analyst II

#### All Parentheticals:

Ability to analyze problems accurately, develop appropriate solutions, and recommend effective optional courses of action; identify improvements and to originate and develop new solutions which depart from traditional and existing patterns; assume increased responsibility; flexibility; work effectively with others.

## Class History

Class	Date Established	Date Revised	Title Changed
Research Analyst I (General)	04/01/1976	12/19/1979	--
Research Analyst I (Economics)	09/07/1976	12/19/1979	12/19/1979
Research Analyst I (Demography)	07/21/1977	12/19/1979	--
Research Analyst I (Social/Behavioral)	11/30/1977	--	--
Research Analyst I (Geographic Information Systems)	07/24/1990	--	--
Research Analyst II (General)	04/01/1976	12/19/1979	--
Research Analyst II (Social/Behavioral)	04/01/1976	12/19/1979	--
Research Analyst II (Economics)	09/07/1976	12/19/1979	12/19/1979
Research Analyst II (Demography)	07/21/1977	12/19/1979	12/19/1979
Research Analyst II (Geographic Information Systems)	07/24/1990	--	--

Research Analyst (Various Classes) Series History - Dates Established, Revised, and Title Changed

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